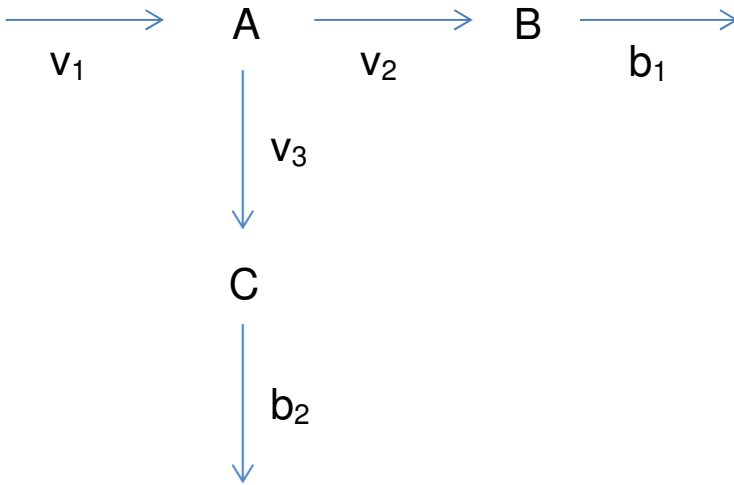# Homework #2

Problem 1: Solution of System of Linear Algebraic Equations

Consider the following system:

Assume that the fluxes entering and leaving the system are known and given by:

$b_1 = 2$ and $b_2 = 1$

Compute v_1, v_2, and v_3 using the Gauss algorithm discussed in class (by hand). Show the intermediate steps.

Problem 2: Implementation of Gauss algorithm

Implement the Gauss algorithm in MATLAB. Make sure that the algorithm will output some of the intermediate results. Include a printout of the algorithm.

Problem 3: Using Gauss algorithm for Solution of Linear Algebraic Equations

a) Use the MATLAB implementation of the Gauss algorithm to solve Problem 1.
b) Repeat the procedure (in MATLAB only) for $b_1 = 4$ and $b_2 = 3$

Problem 4: Dynamics and Steady State

What would happen to the dynamic model if the fluxes entering and leaving the system would be given by $b_1 = 1$, $b_2 = 1$, and $v_1 = 1$, i.e., all inputs and outputs are fixed at these values?